What is claimed is:

1   1.   An apparatus controlling a digital transport stream on a digital settop box, the

2   apparatus comprising:

3   a data receiving unit being connected to a digital subscriber line port and an Ethernet port,

4   said data receiving unit receiving signals from at least one selected from among an asynchronous

5   transfer mode network and an Internet protocol network, the signals corresponding to at least one

6   selected from among asynchronous transfer mode digital broadcasting, asynchronous transfer

7   mode video on demand, Internet protocol mode digital broadcasting, and Internet protocol video

8   on demand, said data receiving unit identifying the received signals by determining when the

9   received signals are asynchronous transfer mode data, when the received signals are Internet

10   protocol over asynchronous transfer mode data, and when the received signals are Internet protocol

11   data, said data receiving unit transmitting information corresponding to the received signals in

12   dependence upon the identifying;

13   an extracting unit determining when the transmitted information corresponds to a portion

14   of a Moving Picture Experts Group transport stream and when the transmitted information

15   corresponds to Internet protocol packet data, said extracting unit extracting valid cells from

16   asynchronous transfer mode cells when the transmitted information includes asynchronous transfer

17   mode cells;

18   a transport stream forming unit receiving the extracted valid cells, modifying the extracted

19   valid cells to form modified cells, the modifying including removing a predetermined byte of head

20 information and overhead information from the extracted valid cells, forming the Moving Picture

21 Experts Group transport stream by re_assembling the modified cells; and

22 a data transforming unit transforming the Moving Picture Experts Group transport stream

23 transmitted from said transport stream forming unit to be displayed by a video display.

1 2. The apparatus of claim 1, with the Moving Picture Experts Group transport stream

2 corresponding to an asynchronous transfer mode Moving Picture Experts Group transport stream.

1 3. The apparatus of claim 1, with said data receiving unit comprising:

2 a digital subscriber line receiving unit receiving the asynchronous transfer mode data and

3 the Internet protocol data through a digital subscriber line interface; and

4 an Ethernet receiving unit receiving the Internet protocol data through an Ethernet

5 interface.

1 4. The apparatus of claim 1, with said data transforming unit comprising:

2 a decoding unit decoding the Moving Picture Experts Group transport stream transmitted

3 from said transport stream forming unit; and

4 an encoding unit encoding the Moving Picture Experts Group transport stream decoded by

5 said decoding unit to be displayed by the video display.

1 5. The apparatus of claim 4, further comprising:

2   a processing unit receiving the Internet protocol over asynchronous transfer mode data from

3   said digital subscriber line receiving unit, said processing unit receiving the Internet protocol data

4   from said digital subscriber line receiving unit, said processing unit extracting valid cells from the

5   Internet protocol over asynchronous transfer mode data and the Internet protocol data received

6   from said digital subscriber line;

7   said processing unit receiving the Internet protocol data from said Ethernet receiving unit

8   and extracting valid cells from the Internet protocol data received from said Ethernet receiving

9   unit.

1   6.   The apparatus of claim 5, further comprising:

2   a control unit determining when the valid cells extracted from the asynchronous transfer

3   mode cells by said extracting unit correspond to at least one selected from among the Moving

4   Picture Experts Group transport stream and general Internet data, determining when the valid cells

5   extracted from the Internet protocol over asynchronous transfer mode data by said processing unit

6   correspond to at least one selected from among the Moving Picture Experts Group transport stream

7   and the general Internet data, and determining when the valid cells extracted from the Internet

8   protocol data by said processing unit correspond to at least one selected from among the Moving

9   Picture Experts Group transport stream and the general Internet data, said control unit re-

10   assembling the cells in dependence upon the determining, said control unit transmitting the

11   Moving Picture Experts Group transport stream to said decoding unit, and said control unit

12   transmitting the general Internet data to said encoding unit.

1   7.   The apparatus of claim 6, with the Moving Picture Experts Group transport stream

2   corresponding to an asynchronous transfer mode Moving Picture Experts Group transport stream.

1   8.   The apparatus of claim 7, with said data receiving unit comprising:

2   a digital subscriber line receiving unit receiving the asynchronous transfer mode data and

3   the Internet protocol data through a digital subscriber line interface; and

4   an Ethernet receiving unit receiving the Internet protocol data through an Ethernet

5   interface.

1   9.   The apparatus of claim 1, further comprising:

2   a processing unit receiving the Internet protocol over asynchronous transfer mode data from

3   said digital subscriber line receiving unit, said processing unit receiving the Internet protocol data

4   from said digital subscriber line receiving unit, said processing unit extracting valid cells from the

5   Internet protocol over asynchronous transfer mode data and the Internet protocol data received

6   from said digital subscriber line;

7   said processing unit receiving the Internet protocol data from said Ethernet receiving unit

8   and extracting valid cells from the Internet protocol data received from said Ethernet receiving

9   unit.

1   10.   An apparatus, comprising:

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2   a data receiving unit being connected to at least two ports, said data receiving unit receiving

3   signals from at least one selected from among an asynchronous transfer mode network and an

4   Internet protocol network, the signals corresponding to at least one selected from among

5   asynchronous transfer mode digital broadcasting, asynchronous transfer mode video on demand,

6   Internet protocol mode digital broadcasting, and Internet protocol video on demand, said data

7   receiving unit identifying the received signals by determining when the received signals are

8   asynchronous transfer mode data, when the received signals are Internet protocol over

9   asynchronous transfer mode data, and when the received signals are Internet protocol data, said

10   data receiving unit transmitting information corresponding to the received signals in dependence

11   upon the identifying;

12   an extracting unit determining when the transmitted information corresponds to a portion

13   of a Moving Picture Experts Group transport stream and when the transmitted information

14   corresponds to Internet protocol packet data, said extracting unit extracting valid cells from

15   asynchronous transfer mode cells when the transmitted information includes asynchronous transfer

16   mode cells; and

17   a transport stream forming unit receiving the extracted valid cells, modifying the extracted

18   valid cells to form modified cells, the modifying including removing predetermined information

19   from the extracted valid cells, forming the Moving Picture Experts Group transport stream by

20   re_assembling the modified cells, and outputting video data to be transformed and then displayed

21   by a video display.

1   11.   The apparatus of claim 10, the predetermined information including a

2   predetermined byte of head information and overhead information.

1   12.   The apparatus of claim 10, with the at least two ports including a digital subscriber

2   line port and an Ethernet port.

1   13.   The apparatus of claim 12, with said data receiving unit comprising:

2   a digital subscriber line receiving unit receiving the asynchronous transfer mode data and

3   the Internet protocol data through a digital subscriber line interface; and

4   an Ethernet receiving unit receiving the Internet protocol data through an Ethernet

5   interface.

1   14.   The apparatus of claim 13, further comprising:

2   a data transforming unit performing transforming after said transport stream forming unit

3   outputs the video data, said data transforming unit comprising:

4   a decoding unit decoding the Moving Picture Experts Group transport stream transmitted

5   from said transport stream forming unit; and

6   an encoding unit encoding the Moving Picture Experts Group transport stream decoded by

7   said decoding unit to be displayed by the video display.

1   15.   The apparatus of claim 14, further comprising:

2   a processing unit receiving the Internet protocol over asynchronous transfer mode data from

3   said digital subscriber line receiving unit, said processing unit receiving the Internet protocol data

4   from said digital subscriber line receiving unit, said processing unit extracting valid cells from the

5   Internet protocol over asynchronous transfer mode data and the Internet protocol data received

6   from said digital subscriber line;

7   said processing unit receiving the Internet protocol data from said Ethernet receiving unit

8   and extracting valid cells from the Internet protocol data received from said Ethernet receiving

9   unit.

1   16.   The apparatus of claim 15, further comprising:

2   a control unit determining when the valid cells extracted from the asynchronous transfer

3   mode cells by said extracting unit correspond to at least one selected from among the Moving

4   Picture Experts Group stream and general Internet data, determining when the valid cells extracted

5   from the Internet protocol over asynchronous transfer mode data by said processing unit

6   correspond to at least one selected from among the Moving Picture Experts Group stream and the

7   general Internet data, and determining when the valid cells extracted from the Internet protocol

8   data by said processing unit correspond to at least one selected from among the Moving Picture

9   Experts Group stream and the general Internet data, said control unit re-assembling the cells in

10   dependence upon the determining, said control unit transmitting the Moving Picture Experts Group

11   stream to said decoding unit, and said control unit transmitting the general Internet data to said

12   encoding unit.

1   17.   The apparatus of claim 10, further comprising:

2   a data transforming unit performing transforming after said transport stream forming unit

3   outputs the video data, said data transforming unit comprising:

4   a decoding unit decoding the Moving Picture Experts Group transport stream transmitted

5   from said transport stream forming unit; and

6   an encoding unit encoding the Moving Picture Experts Group transport stream decoded by

7   said decoding unit to be displayed by the video display.